IMPROVED LASER ALIGN SENSOR WITH SEQUENCING LIGHT SOURCES

ABSTRACT OF THE DISCLOSURE

A sensor for sensing placement information of a component to be placed by a pick and place machine is disclosed. The sensor includes a plurality of light sources each of which is disposed to direct illumination at different angles of incidence upon the component. Each source is further adapted to generate light based upon an energization signal. Source control electronics are provided and coupled to the plurality of light sources to successively and/or provide energization signals to each source. A detector is disposed within the sensor relative to the plurality of sources to receive at least one shadow of the component, and provide data at a detector output indicative of the shadow imaged while the component is rotated.